

REMARKSINTRODUCTION:

In accordance with the foregoing, claims 1, 17, 19, and 23 have been amended.

No new matter is being presented, and approval and entry of the foregoing amendments and new claims are respectfully requested.

Claims 1, 2, 13-17, 19, 21, 23, 24, 27, 30, 38, 40, and 42 are pending and under consideration. Reconsideration is requested.

REJECTION UNDER 35 U.S.C. §103:

In the Office Action at pages 2-4, the Examiner rejects claims 1, 2, and 38 under 35 U.S.C. §103 in view of Campanelli, Hawkins et al. (U.S. Patent No. Re: 32,572) (hereafter "Hawkins '572"), and Hawkins et al. (U.S. Patent No. 5,006,202) (hereafter "Hawkins '202"). The rejection is respectfully traversed and reconsideration is requested.

By way of review, Campanelli discloses a heating element 34 disposed in a through hole 35 disposed on a heating element wafer 36. Disposed above each heating element 34 is a channel plate 31 having an ink channel 21, a manifold 22, and nozzles 27 for each printhead 12. The through holes 35 are disclosed as being used to inhibit lateral movement of the bubble growth during operation. A polymer layer 58 is disposed between a channel plate 31 and the heating element wafer 36. (Col. 5, lines 26-34, col. 6, lines 50-68; FIGs. 1, 2, 4, and 5 of Campanelli). However, as shown in FIG. 5, Campanelli teaches that the through hole 35 is within the layer 58. There is no suggestion that the layer 58 covers the through hole 35, or that the layer 58 separates fluid within the through hole 35 from the nozzles 27.

On page 7 of the Office Action, the Examiner construes the holes 35 as corresponding to the recited fluid chambers, and the heating element wafer 36 as corresponding to the recited heat driving part. However, even assuming arguendo that the Examiner's construction is correct, it is noted that the layer 58 does not separate the hole 35 from the wafer 36 since the hole is within the layer 58, thereby defining the walls of the hole 35 so as to inhibit the lateral movement of the bubble during operation. As such, even given the broadest reasonable interpretation and without reference to the specification, the layer 58 defining the walls of the hole 35 does not correspond to the "adhering a membrane to the formed nozzle part and a heat driving part including fluid chambers for the corresponding fluid jetting apparatuses so as to position the heat driving part, the membrane and the nozzle part such that the membrane is disposed therebetween to separate the fluid chambers from the nozzle part" as recited in claim 1.

Since Hawkins '572 and Hawkins '202 are not relied upon and do not disclose such a feature, it is respectfully submitted that the combination of Campanelli, Hawkins '572, and Hawkins '202 does not disclose or suggest the invention recited in claim 1.

Claims 2 and 38 are deemed patentable due at least to their depending from claim 1.

Rejection of claims 17 and 19

On pages 4-5 of the Office Action, the Examiner rejects claims 17 and 19 under 35 U.S.C. §103 in view of Leban (U.S. Patent No. 5,299,785) and Baise et al. (U.S. Patent No. 4,371,565). The rejection is respectfully traversed and reconsideration is requested.

By way of review, claim 17 recites, among other features, "adhering the nozzle part with the silicon wafer to a membrane," and "adhering the membrane with the adhered nozzle part to a heat driving part such that the membrane is between the heat driving part and jetting fluid chambers of the nozzle part to form the fluid jetting apparatuses as an undivided unit."

In contrast, while the Examiner asserts on page 4 of the Office Action that a barrier layer 22 of Leban corresponds to the membrane recited in claim 17, as shown in FIG. 1H, the barrier layer 22 forms walls of the firing chamber 32. The heating element 36 is disclosed as being within the firing chamber 32. There is no suggestion that the barrier layer 22 extends across the firing chamber 32 or otherwise extends across an opening.

Since Baise et al. is not relied upon as disclosing such a feature, it is respectfully submitted that the combination of Leban and Baise et al. does not disclose or suggest the invention recited in claim 17.

Claim 19 is deemed patentable due at least to its depending from claim 17.

Rejection of claim 23

On pages 5-6 of the Office Action, the Examiner rejects claim 23 under 35 U.S.C. §103 in view of Leban, Baise et al., and Tsung Pan (U.S. Patent No. 4,894,664). The rejection is respectfully traversed and reconsideration is requested.

As an initial matter, Tsung Pan is not relied upon and does not disclose the recited membrane of claim 17. As such, it is respectfully submitted that the combination of Leban, Baise et al., and Tsung Pan does not disclose or suggest the invention recited in claim 23 due at least to the combination not disclosing the invention recited in claim 17, from which claim 23 depends.

Rejection of claim 40

On page 6 of the Office Action, the Examiner rejects claim 40 under 35 U.S.C. §103 in

view of Leban, Baise et al., and Campanelli. The rejection is respectfully traversed and reconsideration is requested.

On page 10 of the Office Action, the Examiner relies upon Campanelli as disclosing separating the fluid jetting apparatuses using a dicing blade. Even assuming arguendo that the Examiner is correct, it is respectfully submitted that Campanelli does not disclose or suggest a membrane as recited in claim 17, from which claim 40 depends. As such, it is respectfully submitted that the combination of Leban, Baise et al., and Campanelli does not disclose or suggest the invention recited in claim 40 due at least to the combination not disclosing the invention recited in claim 17, from which claim 40 depends.

STATUS OF CLAIMS NOT REJECTED:

On page 8 of the Office Action, the Examiner allows claims 13-16, 21, 24, 27, 30, and 42.

CONCLUSION:

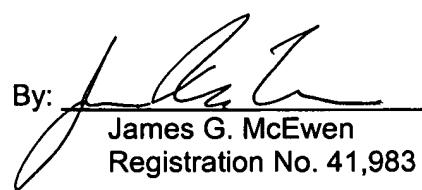
In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, it is respectfully submitted that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any additional fees associated with the filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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